

## ABSTRACT OF THE DISCLOSURE

A radio-frequency (RF) apparatus includes front-end circuitry. The front-end circuitry includes a filter circuitry and an impedance matching circuitry. The filter circuitry has a differential output that has an output impedance. The filter circuitry filters signals outside a signal band of interest. The impedance matching network has a differential input coupled to the output of the filter circuitry. The impedance matching network also has a differential output coupled to a signal processing circuitry. The signal processing circuitry has an input impedance. The impedance matching network matches the input impedance of the signal processing circuitry to the output impedance of the filter circuitry.